

memory (RAM) and read only memory (ROM). The module **201** also includes an number of input/output (I/O) interfaces including an audio-video interface **207** that couples to the video display **214** and loudspeakers **217**, an I/O interface **213** for the keyboard **202** and mouse **203** and optionally a joystick (not illustrated), and an interface **208** for the modem **216** and printer **215**. In some implementations, the modem **216** may be incorporated within the computer module **201**, for example within the interface **208**. A storage device **209** is provided and typically includes a hard disk drive **210** and a floppy disk drive **211**. A magnetic tape drive (not illustrated) may also be used. A CD-ROM drive **212** is typically provided as a non-volatile source of data. The components **205** to **213** of the computer module **201**, typically communicate via an interconnected bus **204** and in a manner which results in a conventional mode of operation of the computer system **200** known to those in the relevant art. Examples of computers on which the described arrangements can be practised include IBM-PC's and compatibles, Sun Sparcs-tations or alike computer systems evolved therefrom.

[0094] Typically, the application program is resident on the hard disk drive **210** and read and controlled in its execution by the processor **205**. Intermediate storage of the program and any data fetched from the network **220** may be accomplished using the semiconductor memory **206**, possibly in concert with the hard disk drive **210**. In some instances, the application program may be supplied to the user encoded on a CD-ROM or floppy disk and read via the corresponding drive **212** or **211**, or alternatively may be read by the user from the network **220** via the modem device **216**. Still further, the software can also be loaded into the computer system **200** from other computer readable media. The term "computer readable medium" as used herein refers to any storage or transmission medium that participates in providing instructions and/or data to the computer system **200** for execution and/or processing. Examples of storage media include floppy disks, magnetic tape, CD-ROM, a hard disk drive, a ROM or integrated circuit, a magneto-optical disk, or a computer readable card such as a PCMCIA card and the like, whether or not such devices are internal or external of the computer module **201**. Examples of transmission media include radio or infra-red transmission channels as well as a network connection to another computer or networked device, and the Internet or Intranets including e-mail transmissions and information recorded on Websites and the like.

[0095] The method **100** of editing a document may alternatively be implemented in dedicated hardware such as one or more integrated circuits performing the functions or sub functions of the method **100**. Such dedicated hardware may include graphic processors, digital signal processors, or one or more microprocessors and associated memories.

[0096] As will be explained in detail below, the method **100** is executed when a user creates a document (i.e., a digital photo album) and associated layout on the computer **200**, for example. The document and the associated layout can be published over the network **220** to a list of one or more recipients (i.e., a PUBLISH event) configured within the document. These recipients are hereinafter referred to as collaborators. Some or all of the collaborators can modify (i.e., further enhance) the layout of the published photo album and publish the modifications (i.e., a MODIFY event) over the network **220**. During the execution of the method

100, one or more of the collaborators may log in and/or out of an editing session for the document on the network **220** (i.e., LOGIN and LOGOUT events).

[0097] While the collaborators are logged into the current editing session they are referred to as active collaborators. A list of active collaborators (i.e., those collaborators currently logged into a current editing session for the document) is preferably configured within memory **206**. The receipt of the published document and any modifications thereto can be acknowledged by the collaborators of the originally published document (i.e., ACK_DOC and ACK_MODIFY events). Subsequently, simultaneous modifications to the published document can be merged with the originally published document.

[0098] The method **100** of editing a document is preferably implemented as software resident on the hard disk drive **210** and being controlled in its execution by the processor **205**. The method **100** begins at step **101**, where the processor **205** detects a request (i.e., a message) entered via the keyboard **202** or mouse **203** or received over the network **220** from another computer (e.g., servers **295**, **299**) connected to the network **220**. Upon receiving such a message, the method **100** proceeds to step **103**, where the message is examined by the processor **205** to determine the source of the message. If the message originates from the keyboard **202** or mouse **203**, then the method **100** proceeds to step **107**. Otherwise, if the message originated from the network **220**, then the method **100** proceeds to step **105**, where the processor **205** processes the network message and then returns to step **101**. A method **300** for processing the network message as executed at step **105** will be explained below with reference to FIG. 3.

[0099] At step **107**, if the processor **205** determines that the document (i.e., a photo album) is to be published (i.e., a PUBLISH message is detected) then the method **100** proceeds to step **110**. At step **110** the document is transmitted to one or more collaborators as will be described below with reference to FIG. 11, and execution returns to step **101**. The published document includes information, hereinafter referred to as 'version information', embedded therein. The version information includes a version string identifying the current version of the document. The version information can also indicate the name (i.e., a username) of the author of the document, which of the collaborators have acknowledged receiving the latest version of the document, and the UUID (i.e., a universally-unique identifier) of the document. The UUID of the document is the same for each of the versions of a document (i.e., the original document and a modified version of the original document both have the same UUID albeit with a different version number).

[0100] If the processor **205** determines that the document is to be modified (i.e., a MODIFY message is detected), at step **107**, then execution proceeds to step **112**. At step **112**, the processor **205** transmits a patch representing a modification to the document, over the network **220** to one or more collaborators as will be described below with reference to FIG. 12, and execution returns to step **101**.

[0101] Any modifications to the originally published document made by one or more of the collaborators listed within the document can be subsequently merged. In accordance with the method **100**, a distinction is made between the merging of simultaneous modifications to the document